

ANNUAL INDEX

The following index lists all the authors and articles that appeared in SCIENTIFIC AMERICAN during 1978. Also indexed are "Mathematical Games" and "The Amateur Scientist."

AUTHORS

- Albrecht-Buehler, Guenter. THE TRACKS OF MOVING CELLS; April, page 68.
- Arvidson, Raymond E., Alan B. Binder and Kenneth L. Jones. THE SURFACE OF MARS; March, page 76.
- Ayala, Francisco J. THE MECHANISMS OF EVOLUTION; September, page 56.
- Bahadori, Mehdi N. PASSIVE COOLING SYSTEMS IN IRANIAN ARCHITECTURE; February, page 144.
- Bassuk, Ellen L., and Samuel Gerson. DEINSTITUTIONALIZATION AND MENTAL HEALTH SERVICES; February, page 46.
- Binder, Alan B., Raymond E. Arvidson and Kenneth L. Jones. THE SURFACE OF MARS; March, page 76.
- Bonatti, Enrico. THE ORIGIN OF METAL DEPOSITS IN THE OCEANIC LITHOSPHERE; February, page 54.
- Bormann, F. Herbert, James R. Gosz, Richard T. Holmes and Gene E. Likens. THE FLOW OF ENERGY IN A FOREST ECOSYSTEM; March, page 92.
- Bromley, D. Allan. NUCLEAR MOLECULES; December, page 58.
- Butler, P. Jonathan G., and Aaron Klug. THE ASSEMBLY OF A VIRUS; November, page 62.
- Calder III, William A. THE KIWI; July, page 132.
- Cerny, Joseph, and Arthur M. Poskanzer. EXOTIC LIGHT NUCLEI; June, page 60.
- Chaisson, Eric J. GASEOUS NEBULAS; December, page 164.
- Cheng, K.-J., J. W. Costerton and G. G. Geesey. HOW BACTERIA STICK; January, page 86.
- Clayton, Robert N., and David N. Schramm. DID A SUPERNOVA TRIGGER THE FORMATION OF THE SOLAR SYSTEM?; October, page 124.
- Costerton, J. W., G. G. Geesey and K.-J. Cheng. HOW BACTERIA STICK; January, page 86.
- Cox, Keith G. KIMBERLITE PIPES; April, page 120.
- Crawshaw, Larry I., H. Craig Heller and Harold T. Hammel. THE THERMOSTAT OF VERTEBRATE ANIMALS; August, page 102.
- Croce, Carlo M., and Hilary Koprowski. THE GENETICS OF HUMAN CANCER; February, page 117.
- Croft, Thomas A. NIGHTTIME IMAGES OF THE EARTH FROM SPACE; July, page 86.
- Devey, Gilbert B., and Peter N. T. Wells. ULTRASOUND IN MEDICAL DIAGNOSIS; May, page 98.
- Dickerson, Richard E. CHEMICAL EVOLUTION AND THE ORIGIN OF LIFE; September, page 70.
- Dickinson, Dale F. COSMIC MASERS; June, page 90.
- Dunn-Rankin, Peter. THE VISUAL CHARACTERISTICS OF WORDS; January, page 122.
- Edwards, Harold M. FERMAT'S LAST THEOREM; October, page 104.
- Erber, Jochen, and Randolph Menzel. LEARNING AND MEMORY IN BEES; July, page 102.
- Feder, Ralph, and Eberhard Spiller. THE OPTICS OF LONG-WAVELENGTH X RAYS; November, page 70.
- Fein, Jack M. MICROVASCULAR SURGERY FOR STROKE; April, page 58.
- Fickett, Arnold P. FUEL-CELL POWER PLANTS; December, page 70.
- Findler, Nicholas V. COMPUTER POKER; July, page 144.
- Flower, Andrew R. WORLD OIL PRODUCTION; March, page 42.
- Freedman, Daniel Z., and Peter van Nieuwenhuizen. SUPERGRAVITY AND THE UNIFICATION OF THE LAWS OF PHYSICS; February, page 126.
- Furshpan, Edwin J., Paul H. Patterson and David D. Potter. THE CHEMICAL DIFFERENTIATION OF NERVE CELLS; July, page 50.
- Gauri, K. Lal. THE PRESERVATION OF STONE; June, page 126.
- Geesey, G. G., J. W. Costerton and K.-J. Cheng. HOW BACTERIA STICK; January, page 86.
- Gerson, Samuel, and Ellen L. Bassuk. DEINSTITUTIONALIZATION AND MENTAL HEALTH SERVICES; February, page 46.
- Gogel, Walter C. THE ADJACENCY PRINCIPLE IN VISUAL PERCEPTION; May, page 126.
- Gordon, Richard, and Antone G. Jacobson. THE SHAPING OF TISSUES IN EMBRYOS; June, page 106.
- Gorenstein, Paul, and Wallace Tucker. RICH CLUSTERS OF GALAXIES; November, page 110.
- Gosz, James R., Richard T. Holmes, Gene E. Likens and F. Herbert Bormann. THE FLOW OF ENERGY IN A FOREST ECOSYSTEM; March, page 92.
- Graham, Ronald L. THE COMBINATORIAL MATHEMATICS OF SCHEDULING; March, page 124.
- Greeley, Andrew M., D. Garth Taylor and Paul B. Sheatsley. ATTITUDES TOWARD RACIAL INTEGRATION; June, page 42.
- Greene, Peter R., and Thomas A. McMahon. FAST RUNNING TRACKS; December, page 148.
- Gregor, Charles D., and Harry P. Gregor. SYNTHETIC-MEMBRANE TECHNOLOGY; July, page 112.
- Gregor, Harry P., and Charles D. Gregor. SYNTHETIC-MEMBRANE TECHNOLOGY; July, page 112.
- Hammel, Harold T., H. Craig Heller and Larry I. Crawshaw. THE THERMOSTAT OF VERTEBRATE ANIMALS; August, page 102.
- Heiles, Carl. THE STRUCTURE OF THE INTERSTELLAR MEDIUM; January, page 74.
- Heller, H. Craig, Larry I. Crawshaw and Harold T. Hammel. THE THERMOSTAT OF VERTEBRATE ANIMALS; August, page 102.
- Heslop-Harrison, Yolande. CARNIVOROUS PLANTS; February, page 104.
- Hinkle, Peter C., and Richard E. McCarty. HOW CELLS MAKE ATP; March, page 104.
- Holmes, Richard T., James R. Gosz, Gene E. Likens and F. Herbert Bormann. THE FLOW OF ENERGY IN A FOREST ECOSYSTEM; March, page 92.
- Hooven, Frederick J. THE WRIGHT BROTHERS' FLIGHT-CONTROL SYSTEM; November, page 166.
- Hsü, Kenneth J. WHEN THE BLACK SEA WAS DRAINED; May, page 52.
- Hull, Barbara E., and L. Andrew Staehelin. JUNCTIONS BETWEEN LIVING CELLS; May, page 140.
- Humphrey, John H., and John Griffiths Pedley. ROMAN CARTHAGE; January, page 110.
- Ingvær, David H., Niels A. Lassen and Erik Skinhøj. BRAIN FUNCTION AND BLOOD FLOW; October, page 62.
- Isaac, Glynn. THE FOOD-SHARING BEHAVIOR OF PROTOHUMAN HOMINIDS; April, page 90.
- Isbell, William H. THE PREHISTORIC GROUND DRAWINGS OF PERU; October, page 140.
- Jacobson, Antone G., and Richard Gordon. THE SHAPING OF TISSUES IN EMBRYOS; June, page 106.
- Jones, Jack Colvard. THE FEEDING BEHAVIOR OF MOSQUITOES; June, page 138.
- Jones, Kenneth L., Raymond E. Arvidson and Alan B. Binder. THE SURFACE OF MARS; March, page 76.
- Kaplan, Fred M. ENHANCED-RADIATION WEAPONS; May, page 44.
- Kaufer, Herbert, David A. Sonstegard and Larry S. Matthews. THE SURGICAL REPLACEMENT OF THE HUMAN KNEE JOINT; January, page 44.
- Kim, Sung Hou, and Alexander Rich. THE THREE-DIMENSIONAL STRUCTURE OF TRANSFER RNA; January, page 52.
- Kirk, William T., and Martin L. Perl. HEAVY LEPTONS; March, page 50.
- Klein, H. Arthur. PIETER BRUEGEL THE ELDER AS A GUIDE TO 16TH-CENTURY TECHNOLOGY; March, page 134.
- Klug, Aaron, and P. Jonathan G. Butler. THE ASSEMBLY OF A VIRUS; November, page 62.
- Koprowski, Hilary, and Carlo M. Croce. THE GENETICS OF HUMAN CANCER; February, page 117.

- Land, Michael F. *ANIMAL EYES WITH MIRROR OPTICS*; December, page 126.
- Lassen, Niels A., David H. Ingvar and Erik Skinhøj. *BRAIN FUNCTION AND BLOOD FLOW*; October, page 62.
- Leakey, Richard E. F., and Alan Walker. *THE HOMINIDS OF EAST TURKANA*; August, page 54.
- Lederman, Leon M. *THE UPSILON PARTICLE*; October, page 72.
- Lester, Richard K., and David J. Rose. *NUCLEAR POWER, NUCLEAR WEAPONS AND INTERNATIONAL STABILITY*; April, page 45.
- Lewis, Harry R., and Christos H. Papadimitriou. *THE EFFICIENCY OF ALGORITHMS*; January, page 96.
- Lewontin, Richard C. *ADAPTATION*; September, page 212.
- Likens, Gene E., James R. Gosz, Richard T. Holmes and F. Herbert Bormann. *THE FLOW OF ENERGY IN A FOREST ECOSYSTEM*; March, page 92.
- Linsley, John. *THE HIGHEST-ENERGY COSMIC RAYS*; July, page 60.
- Luff, Peter P. *THE ELECTRONIC TELEPHONE*; March, page 58.
- Lynch, David K. *ATMOSPHERIC HALOS*; April, page 144.
- McCarty, Richard E., and Peter C. Hinkle. *HOW CELLS MAKE ATP*; March, page 104.
- McMahon, Thomas A., and Peter R. Greene. *FAST RUNNING TRACKS*; December, page 148.
- Matthews, Larry S., David A. Sonstegard and Herbert Kaufer. *THE SURGICAL REPLACEMENT OF THE HUMAN KNEE JOINT*; January, page 44.
- May, Robert M. *THE EVOLUTION OF ECOLOGICAL SYSTEMS*; September, page 160.
- Mayr, Ernst. *EVOLUTION*; September, page 46.
- Menzel, Randolph, and Jochen Erber. *LEARNING AND MEMORY IN BEES*; July, page 102.
- Milne, Lorus J., and Margery Milne. *INSECTS OF THE WATER SURFACE*; April, page 134.
- Milne, Margery, and Lorus J. Milne. *INSECTS OF THE WATER SURFACE*; April, page 134.
- Morrison, Philip, and Paul F. Walker. *A NEW STRATEGY FOR MILITARY SPENDING*; October, page 48.
- Moskowitz, Breyne Arlene. *THE ACQUISITION OF LANGUAGE*; November, page 92.
- Muller, Richard A. *THE COSMIC BACKGROUND RADIATION AND THE NEW AETHER DRIFT*; May, page 64.
- Nevins, James L., and Daniel E. Whitney. *COMPUTER-CONTROLLED ASSEMBLY*; February, page 62.
- O'Keefe, John A. *THE TEKTITE PROBLEM*; August, page 116.
- Olander, Donald R. *THE GAS CENTRIFUGE*; August, page 37.
- Papadimitriou, Christos H., and Harry R. Lewis. *THE EFFICIENCY OF ALGORITHMS*; January, page 96.
- Patterson, Paul H., David D. Potter and Edwin J. Furshpan. *THE CHEMICAL DIFFERENTIATION OF NERVE CELLS*; July, page 50.
- Pedley, John Griffiths, and John H. Humphrey. *ROMAN CARTHAGE*; January, page 110.
- Perl, Martin L., and William T. Kirk. *HEAVY LEPTONS*; March, page 50.
- Perutz, M. F. *HEMOGLOBIN STRUCTURE AND RESPIRATORY TRANSPORT*; December, page 92.
- Pippenger, Nicholas. *COMPLEXITY THEORY*; June, page 114.
- Poskanzer, Arthur M., and Joseph Cerny. *EXOTIC LIGHT NUCLEI*; June, page 60.
- Potter, David D., Paul H. Patterson and Edwin J. Furshpan. *THE CHEMICAL DIFFERENTIATION OF NERVE CELLS*; July, page 50.
- Proctor, Warren G. *NEGATIVE ABSOLUTE TEMPERATURES*; August, page 90.
- Redford, Donald B. *THE RAZED TEMPLE OF AKHENATEN*; December, page 136.
- Rich, Alexander, and Sung Hou Kim. *THE THREE-DIMENSIONAL STRUCTURE OF TRANSFER RNA*; January, page 52.
- Rick, Charles M. *THE TOMATO*; August, page 76.
- Rose, David J., and Richard K. Lester. *NUCLEAR POWER, NUCLEAR WEAPONS AND INTERNATIONAL STABILITY*; April, page 45.
- Routtenberg, Aryeh. *THE REWARD SYSTEM OF THE BRAIN*; November, page 154.
- Samuels, Leonard E. *THE MECHANISMS OF ABRASIVE MACHINING*; November, page 132.
- Schmandt-Besserat, Denise. *THE EARLIEST PRECURSOR OF WRITING*; June, page 50.
- Schopf, J. William. *THE EVOLUTION OF THE EARLIEST CELLS*; September, page 110.
- Schramm, David N., and Robert N. Clayton. *DID A SUPERNOVA TRIGGER THE FORMATION OF THE SOLAR SYSTEM?*; October, page 124.
- Sheatsley, Paul B., D. Garth Taylor and Andrew M. Greeley. *ATTITUDES TOWARD RACIAL INTEGRATION*; June, page 42.
- Shepherd, Gordon M. *MICROCIRCUITS IN THE NERVOUS SYSTEM*; February, page 92.
- Skinhøj, Erik, Niels A. Lassen and David H. Ingvar. *BRAIN FUNCTION AND BLOOD FLOW*; October, page 62.
- Smith, John Maynard. *THE EVOLUTION OF BEHAVIOR*; September, page 176.
- Smith, Norman. *ROMAN HYDRAULIC TECHNOLOGY*; May, page 154.
- Sonstegard, David A., Larry S. Matthews and Herbert Kaufer. *THE SURGICAL REPLACEMENT OF THE HUMAN KNEE JOINT*; January, page 44.
- Spiller, Eberhard, and Ralph Feder. *THE OPTICS OF LONG-WAVELENGTH X RAYS*; November, page 70.
- Staehelin, L. Andrew, and Barbara E. Hull. *JUNCTIONS BETWEEN LIVING CELLS*; May, page 140.
- Taylor, D. Garth, Paul B. Sheatsley and Andrew M. Greeley. *ATTITUDES TOWARD RACIAL INTEGRATION*; June, page 42.
- Tucker, Wallace, and Paul Gorenstein. *RICH CLUSTERS OF GALAXIES*; November, page 110.
- Valentine, James W. *THE EVOLUTION OF MULTICELLULAR PLANTS AND ANIMALS*; September, page 140.
- van Nieuwenhuizen, Peter, and Daniel Z. Freedman. *SUPERGRAVITY AND THE UNIFICATION OF THE LAWS OF PHYSICS*; February, page 126.
- Vogel, Steven. *ORGANISMS THAT CAPTURE CURRENTS*; August, page 128.
- Walker, Alan, and Richard E. F. Leakey. *THE HOMINIDS OF EAST TURKANA*; August, page 54.
- Walker, Paul F., and Philip Morrison. *A NEW STRATEGY FOR MILITARY SPENDING*; October, page 48.
- Washburn, Sherwood L. *THE EVOLUTION OF MAN*; September, page 194.
- Wells, Peter N. T., and Gilbert B. Devey. *ULTRASOUND IN MEDICAL DIAGNOSIS*; May, page 98.
- Westoff, Charles F. *MARRIAGE AND FERTILITY IN THE DEVELOPED COUNTRIES*; December, page 51.
- Weymann, Ray J. *STELLAR WINDS*; August, page 44.
- Whitney, Daniel E., and James L. Nevins. *COMPUTER-CONTROLLED ASSEMBLY*; February, page 62.
- Wiley, Jr., R. Haven. *THE LEK MATING SYSTEM OF THE SAGE GROUSE*; May, page 114.
- Williams, Janet M., and Timothy C. Williams. *AN OCEANIC MASS MIGRATION OF LAND BIRDS*; October, page 166.
- Williams, Timothy C., and Janet M. Williams. *AN OCEANIC MASS MIGRATION OF LAND BIRDS*; October, page 166.
- Wilson, David Gordon. *ALTERNATIVE AUTOMOBILE ENGINES*; July, page 39.
- Wolpert, Lewis. *PATTERN FORMATION IN BIOLOGICAL DEVELOPMENT*; October, page 154.
- Woodwell, G. M. *THE CARBON DIOXIDE QUESTION*; January, page 34.
- Yonas, Gerold. *FUSION POWER WITH PARTICLE BEAMS*; November, page 50.
- Zeilik, Michael. *THE BIRTH OF MASSIVE STARS*; April, page 110.

ARTICLES

- ADAPTATION, by Richard C. Lewontin; September, page 212.
- ADJACENCY PRINCIPLE IN VISUAL PERCEPTION, THE, by Walter C. Gogel; May, page 126.
- AKHENATEN, THE RAZED TEMPLE OF, by Donald B. Redford; December, page 136.
- ALGORITHMS, THE EFFICIENCY OF, by

- Harry R. Lewis and Christos H. Papadimitriou; January, page 96.
- ATMOSPHERIC HALOS, by David K. Lynch; April, page 144.
- ATP, HOW CELLS MAKE, by Peter C. Hinkle and Richard E. McCarty; March, page 104.
- AUTOMOBILE ENGINES, ALTERNATIVE, by David Gordon Wilson; July, page 39.
- BACTERIA STICK, HOW, by J. W. Costerton, G. G. Geesey and K.-J. Cheng; January, page 86.
- BEEES, LEARNING AND MEMORY IN, by Randolph Menzel and Jochen Erber; July, page 102.
- BIOLOGICAL DEVELOPMENT, PATTERN FORMATION IN, by Lewis Wolpert; October, page 154.
- BLACK SEA WAS DRAINED, WHEN THE, by Kenneth J. Hsü; May, page 52.
- BRAIN FUNCTION AND BLOOD FLOW, by Niels A. Lassen, David H. Ingvar and Erik Skinhøj; October, page 62.
- BRAIN, THE REWARD SYSTEM OF THE, by Aryeh Routtenberg; November, page 154.
- CANCER, THE GENETICS OF HUMAN, by Carlo M. Croce and Hilary Koprowski; February, page 117.
- CARBON DIOXIDE QUESTION, THE, by G. M. Woodwell; January, page 34.
- CARTHAGE, ROMAN, by John H. Humphrey and John Griffiths Pedley; January, page 110.
- CELLS, JUNCTIONS BETWEEN LIVING, by L. Andrew Staehelin and Barbara E. Hull; May, page 140.
- CELLS, THE TRACKS OF MOVING, by Guenter Albrecht-Buehler; April, page 68.
- COMBINATORIAL MATHEMATICS OF SCHEDULING, THE, by Ronald L. Graham; March, page 124.
- COMPLEXITY THEORY, by Nicholas Pippenger; June, page 114.
- COMPUTER-CONTROLLED ASSEMBLY, by James L. Nevins and Daniel E. Whitney; February, page 62.
- COOLING SYSTEMS IN IRANIAN ARCHITECTURE, PASSIVE, by Mehdi N. Bahadori; February, page 144.
- COSMIC BACKGROUND RADIATION AND THE NEW AETHER DRIFT, THE, by Richard A. Muller; May, page 64.
- COSMIC RAYS, THE HIGHEST-ENERGY, by John Linsley; July, page 60.
- DEINSTITUTIONALIZATION AND MENTAL HEALTH SERVICES, by Ellen L. Bassuk and Samuel Gerson; February, page 46.
- EMBRYOS, THE SHAPING OF TISSUES IN, by Richard Gordon and Antone G. Jacobson; June, page 106.
- ENHANCED-RADIATION WEAPONS, by Fred M. Kaplan; May, page 44.
- EVOLUTION, by Ernst Mayr; September, page 46.
- EVOLUTION AND THE ORIGIN OF LIFE, CHEMICAL, by Richard E. Dickerson; September, page 70.
- EVOLUTION OF BEHAVIOR, THE, by John Maynard Smith; September, page 176.
- EVOLUTION OF ECOLOGICAL SYSTEMS, THE, by Robert M. May; September, page 160.
- EVOLUTION OF MAN, THE, by Sherwood L. Washburn; September, page 194.
- EVOLUTION OF MULTICELLULAR PLANTS AND ANIMALS, THE, by James W. Valentine; September, page 140.
- EVOLUTION OF THE EARLIEST CELLS, THE, by J. William Schopf; September, page 110.
- EVOLUTION, THE MECHANISMS OF, by Francisco J. Ayala; September, page 56.
- EYES WITH MIRROR OPTICS, ANIMAL, by Michael F. Land; December, page 126.
- FERMAT'S LAST THEOREM, by Harold M. Edwards; October, page 104.
- FOREST ECOSYSTEM, THE FLOW OF ENERGY IN A, by James R. Gosz, Richard T. Holmes, Gene E. Likens and F. Herbert Bormann; March, page 92.
- FUEL-CELL POWER PLANTS, by Arnold P. Fickett; December, page 70.
- FUSION POWER WITH PARTICLE BEAMS, by Gerold Yonas; November, page 50.
- GALAXIES, RICH CLUSTERS OF, by Paul Gorenstein and Wallace Tucker; November, page 110.
- GAS CENTRIFUGE, THE, by Donald R. Olander; August, page 37.
- GROUND DRAWINGS OF PERU, THE PREHISTORIC, by William H. Isbell; October, page 140.
- HEMOGLOBIN STRUCTURE AND RESPIRATORY TRANSPORT, by M. F. Perutz; December, page 92.
- HOMINIDS OF EAST TURKANA, THE, by Alan Walker and Richard E. F. Leakey; August, page 54.
- HOMINIDS, THE FOOD-SHARING BEHAVIOR OF PROTOHUMAN, by Glynn Isaac; April, page 90.
- IMAGES OF THE EARTH FROM SPACE, NIGHTTIME, by Thomas A. Croft; July, page 86.
- INSECTS OF THE WATER SURFACE, by Lorus J. Milne and Margery Milne; April, page 134.
- INTERSTELLAR MEDIUM, THE STRUCTURE OF THE, by Carl Heiles; January, page 74.
- KIMBERLITE PIPES, by Keith G. Cox; April, page 120.
- KIWI, THE, by William A. Calder III; July, page 132.
- KNEE JOINT, THE SURGICAL REPLACEMENT OF THE HUMAN, by David A. Sonstegard, Larry S. Matthews and Herbert Kaufer; January, page 44.
- LANGUAGE, THE ACQUISITION OF, by Breyne Arlene Moskowitz; November, page 92.
- LEK MATING SYSTEM OF THE SAGE GROUSE, THE, by R. Haven Wiley, Jr.; May, page 114.
- LEPTONS, HEAVY, by Martin L. Perl and William T. Kirk; March, page 50.
- MACHINING, THE MECHANISMS OF ABRASIVE, by Leonard E. Samuels; November, page 132.
- MARRIAGE AND FERTILITY IN THE DEVELOPED COUNTRIES, by Charles F. Westoff; December, page 51.
- MARS, THE SURFACE OF, by Raymond E. Arvidson, Alan B. Binder and Kenneth L. Jones; March, page 76.
- MASERS, COSMIC, by Dale F. Dickinson; June, page 90.
- METAL DEPOSITS IN THE OCEANIC LITHOSPHERE, THE ORIGIN OF, by Enrico Bonatti; February, page 54.
- MIGRATION OF LAND BIRDS, AN OCEANIC MASS, by Timothy C. Williams and Janet M. Williams; October, page 166.
- MILITARY SPENDING, A NEW STRATEGY FOR, by Philip Morrison and Paul F. Walker; October, page 48.
- MOSQUITOES, THE FEEDING BEHAVIOR OF, by Jack Colvard Jones; June, page 138.
- NEBULAS, GASEOUS, by Eric J. Chaisson; December, page 164.
- NEGATIVE ABSOLUTE TEMPERATURES, by Warren G. Proctor; August, page 90.
- NERVE CELLS, THE CHEMICAL DIFFERENTIATION OF, by Paul H. Patterson, David D. Potter and Edwin J. Furshpan; July, page 50.
- NERVOUS SYSTEM, MICROCIRCUITS IN THE, by Gordon M. Shepherd; February, page 92.
- NUCLEAR MOLECULES, by D. Allan Bromley; December, page 58.
- NUCLEAR POWER, NUCLEAR WEAPONS AND INTERNATIONAL STABILITY, by David J. Rose and Richard K. Lester; April, page 45.
- NUCLEI, EXOTIC LIGHT, by Joseph Cerny and Arthur M. Poskanzer; June, page 60.
- OIL PRODUCTION, WORLD, by Andrew R. Flower; March, page 42.
- ORGANISMS THAT CAPTURE CURRENTS, by Steven Vogel; August, page 128.
- PIETER BRUEGEL THE ELDER AS A GUIDE TO 16TH-CENTURY TECHNOLOGY, by H. Arthur Klein; March, page 134.
- PLANTS, CARNIVOROUS, by Yolande Heslop-Harrison; February, page 104.
- POKER, COMPUTER, by Nicholas V. Findler; July, page 144.
- RACIAL INTEGRATION, ATTITUDES TOWARD, by D. Garth Taylor, Paul B. Sheatsley and Andrew M. Greeley; June, page 42.
- ROMAN HYDRAULIC TECHNOLOGY, by Norman Smith; May, page 154.
- RUNNING TRACKS, FAST, by Thomas A. McMahon and Peter R. Greene; December, page 148.
- STARS, THE BIRTH OF MASSIVE, by Michael Zeilik; April, page 110.
- STELLAR WINDS, by Ray J. Weymann; August, page 44.
- STONE, THE PRESERVATION OF, by K. Lal Gauri; June, page 126.
- SUPERGRAVITY AND THE UNIFICATION OF THE LAWS OF PHYSICS, by Daniel Z. Freedman and Peter van Nieuwenhuizen; February, page 126.
- SUPERNOVA TRIGGER THE FORMATION OF

THE SOLAR SYSTEM?, DID A, by David N. Schramm and Robert N. Clayton; October, page 124.

SURGERY FOR STROKE, MICROVASCULAR, by Jack M. Fein; April, page 58.

SYNTHETIC-MEMBRANE TECHNOLOGY, by Harry P. Gregor and Charles D. Gregor; July, page 112.

TEKTITE PROBLEM, THE, by John A. O'Keefe; August, page 116.

TELEPHONE, THE ELECTRONIC, by Peter P. Luff; March, page 58.

THERMOSTAT OF VERTEBRATE ANIMALS, THE, by H. Craig Heller, Larry I. Crawshaw and Harold T. Hammel; August, page 102.

TOMATO, THE, by Charles M. Rick; August, page 76.

TRANSFER RNA, THE THREE-DIMENSIONAL STRUCTURE OF, by Alexander Rich and Sung Hou Kim; January, page 52.

ULTRASOUND IN MEDICAL DIAGNOSIS, by Gilbert B. Devey and Peter N. T. Wells; May, page 98.

UPSILON PARTICLE, THE, by Leon M. Lederman; October, page 72.

VIRUS, THE ASSEMBLY OF A, by P. Jonathan G. Butler and Aaron Klug; November, page 62.

WORDS, THE VISUAL CHARACTERISTICS OF, by Peter Dunn-Rankin; January, page 122.

WRIGHT BROTHERS' FLIGHT-CONTROL SYSTEM, THE, by Frederick J. Hooven; November, page 166.

WRITING, THE EARLIEST PRECURSOR OF, by Denise Schmandt-Besserat; June, page 50.

X RAYS, THE OPTICS OF LONG-WAVELENGTH, by Eberhard Spiller and Ralph Feder; November, page 70.

MATHEMATICAL GAMES

Amazon game, weird dice, card tricks and other playful pastimes, On checker jumping, the; February, page 19.

Bells: versatile numbers that can count partitions of a set, primes and even rhymes, The; May, page 24.

Berrol can be taken apart like an interlocking mechanical puzzle, The sculpture of Miguel; January, page 14.

Card tricks and other playful pastimes, On checker jumping, the amazon game, weird dice; February, page 19.

Checker jumping, the amazon game, weird dice, card tricks and other playful pastimes, On; February, page 19.

Dice, card tricks and other playful pastimes, On checker jumping, the amazon game, weird; February, page 19.

Dracula, Alice, Portia and many others consider various twists of logic, Count; March, page 25.

Egypt, Puzzles and number-theory problems arising from the curious fractions of ancient; October, page 23.

Fractal curves and one-over-f fluctuations, White and brown music; April, page 16.

Fractions of ancient Egypt, Puzzles and number-theory problems arising from the curious; October, page 23.

Mathematical zoo of astounding critters, imaginary and otherwise, A; June, page 18.

Matrix ride again?, Is it a superintelligent robot or does Dr.; December, page 18.

Minimal art, In which a mathematical aesthetic is applied to modern; November, page 22.

Möbius band has a finite thickness, and so it is actually a twisted prism, A; August, page 18.

Peirce: philosopher and gamesman, On Charles Sanders; July, page 18.

Problem-solving matrix, cubes of many colors and three-dimensional dominoes, Puzzling over a; September, page 20.

THE AMATEUR SCIENTIST

Atmosphere, What plumes of smoke tell about the structure of the; May, page 162.

Candle flame, The physics and chemistry underlying the infinite charm of a; April, page 154.

Chemical systems that oscillate between one color and another; July, page 152.

Fireplace, Observations on grinding glass by hand and on making the most of a; August, page 140.

Fluids, Serious fun with Polyox, Silly Putty, Slime and other non-Newtonian; November, page 186.

Glass by hand and on making the most of a fireplace, Observations on grinding; August, page 140.

Illusions that can be achieved by putting a dark filter over one eye, Visual; March, page 142.

Interference, The bright colors in a soap film are a lesson in wave; September, page 232.

Kaleidoscope and other Victorian diversions, Moiré effects, the; December, page 182.

Kites to build and fly, Introducing the Musha, the double lozenge and a number of other; February, page 156.

Liquid can be made to float on the liquid, What enables them to do so?, Drops of; June, page 151.

Moiré effects, the kaleidoscope and other Victorian diversions; December, page 182.

Polarizers and how to use them, particularly for studying polarized sky light, More about; January, page 132.

Smoke tell about the structure of the atmosphere, What plumes of; May, page 162.

Soap film are a lesson in wave interference, The bright colors in a; September, page 232.

Visual illusions that can be achieved by putting a dark filter over one eye; March, page 142.

Whispering galleries are simply sound reflectors, but others are more mysterious, Some; October, page 179.

...an exciting gift for the holidays

FLYING CAMERA 79

A collection of interesting and beautiful aerial satellite pictures with extensive explanations and technical and geographical data.

12 full-color pictures, large format: 19 x 19 inches; calendar 19 x 25.5 inches; spiral binding.

Scenes of geographic, archaeological, historic and general interest are represented. By collecting the pictures, a unique archive of aerial and satellite images will be built up. Used worldwide as eye-catching wall decoration and stimulating teaching aids.

Fantastic photos of:

- Floating gardens of the Aztecs, Mexico
- Landsat: Köln, Osnabrück, and Giessen, Germany
- Mississippi Delta
- The Kirdi of Cameroun
- Rysum: Ancient village on the North Sea coast of Germany
- Katmandu, Nepal
- Landsat: Ulm, Munich, Bregenz, Innsbruck, Germany and Austria
- Niger, Niger
- Heidelberg, Germany
- Akimiski Island, Canada
- Soyuz 22: Lake Baikal, USSR
- Takht-i-Sulaiman, Iran

Order now for holiday delivery. Credit card buyers call collect [215] 382-6673

Heyden & Son Inc.,
Academic Publishers
247 South 41st. St.,
Phila., PA 19104

Please send _____ copies of FLYING CAMERA 1979 at \$16.00 each (plus \$2.50 shipping). Enclose check or credit number and we pay shipping.

name _____

address _____

city _____ state _____ zip _____

card # _____ Interbank # _____

effective date _____ expiration date _____

Master Charge or VISA accepted.

